ONBoard 1200 ex

Version 2.o

for

Towerhawk 1200 ex V1.0

for Amiga 1200

rbm
digitaltechnik

Inroduction

Thank you for purchasing the ONBoard 1200 ex.
The ONBoard 1200 ex allows you to install ZorroII Plug-In-Cards in your Amiga 1200 as you can do in an Amiga 2000, 3000 or 4000. These Plug-In-Cards include graphic accelerators, multi I/O boards, video digitizer and others. The ONBoard 1200 ex supplies you with five ZorroII-Slots. The common PC/ISA slots were left out for a ZorroIII upgrade option since they are only necessary in some special cases. But to the bottom of the Towerhawk you can upgrade two PC/ISA slots.
A video slot, called VidiON ex, is available as an option.

In contrast to the Amiga 2/3/4000 the ZorroII slots on the ONBoard 1200 are not capable of doing DMA transfers. DMA (Direct Memory Access) allows a plug-in-card to transfer data to the Amiga's memory (active). Since this technique is causing various problems with most plug-in-cards we do not use it. To reach the highest level of compatibility with most of the plug-in-cards and Turbo boards we did not implement any DMA features in the ONBoard 1200. This is not really a problem as there are only three DMA-plug-in-cards existing which are not available any more... (see table 1).

The compatibility

is of course the main issue on a doughterboard like the ONBoard 1200 ex. Unfortunately we had to realize that a lot of manufacturers had come to the conclusion that there cannot be another A1200 expansion besides their own expansion. The result are expansion cards that do not give out bus-cycles to the ZorroII address range or do not keep to the autoconfiguration specification. In this case there is no way for the ONBoard 1200 ex to be compatible! In this case you can find some assistance in the chapter *Troubleshooting*.
According to compatibility we tried to simulate the same miserable timing like in the A2000. But since a lot of weird designs exist here we aimed to support all ZorroII-Cards that still run in an A4000. So please make sure that the cards you want to use were not built before 1969 ;-)

Electromagnetic compatibility (EMC) / CE

Electromagnetic compatibility is supposed to guarantee the „compatibility" of different electronic devices. This means that your computer must not interfere with your neighbours radio. Transferring your Amiga into a tower case is not clearly defined according to the EMC. For example older ZorroII-Cards do not have the CE-sign so they were never checked for EMC. Anyway does the combination of products with a CE-sign not imply the EMC of the whole product.
We emphasize that rebuilding your Computer into a new case and adding any components, you become the manufacturer/producer of this system under the law of EMC. So you are also responsible for the electromagnetic compatibility of your system!

ESD-Warning

- Electronic devices are sensitive to becoming charged. Do not wear wool clothing and don't work in a room where you can easily be electrostatically charged .
- Electronic devices are sensitive to mechanic strains. Don't use force if something does not fit at once. There's nothing better than being careful.
- Whatever you do, do it with calmness and coolness. Being in a rush is the beginning of all mistakes!

Content of delivery

1 ONBoard 1200 ex
2 P8/P9-cable for power supply
4 hexagonal screww 5mm
4 flat head screw M3x4mm
2 flat head screw M3x10mm
2 spacer 5mm

Installation

The installation of the ONBoard 1200 ex into the Towerhawk 1200 ex is very simple:
Screw the four hexagonal screws into the mainboard holder of the tower at the positions marked with A in picture 1. Connect the ONBoard 1200 ex to the expansion port of your Amiga and fix it with M3x4mm screws which you should not tighten too hard.
Now may be a little tricky: At the positions marked with B in picture 1 you have to put 5mm spacer underneath the ONBoard 1200 ex and then fix it with a screw M3x10mm.
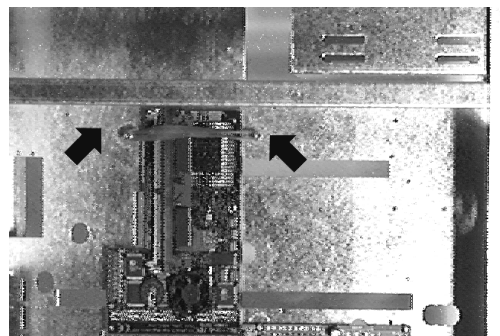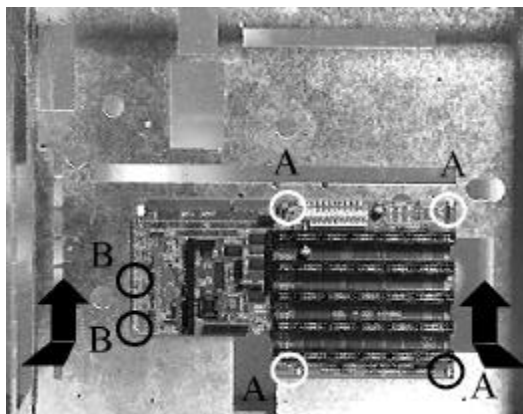Now you can tighten all screws.

Bild 2

You probably would like to know why we do not use the nice hexagonal screws here as well? The answer is very simple: these screws are too long so they would touch the Amiga 1200 mainboard on the other side of the mainboard holder. For the same reason we did not use these screws to mount the Amiga 1200 since there will be some expansions on the other side...

The power connection

Connect the ONBoard with the two P8/P9-cables to the keyboard interface. The connectors are labled with „P8" and „P9" as well as the connectors on the keyboard interface. On the ONBoard the two connectors are beside each other: connect the cables so, that all the black cables are next to each other in the middle. If you are in doubt take a closer look and you will find a small „P8/P9" label on the ONBoard 1200 ex
The ONBoard 1200 ex is protected with fuses which burn in the case of a short circuit. In this case a red LED next to fuse lights up.

The Jumpers

	Closed	Open
CFG0	Blizzard 1230/IV und 1260/1 (sometimes Apollo*)	**Blizzard 1240, 1260/2, PPC 60x other or no Turbo board**
CFG1	Apollo *)	**Blizzard 1240, 1260/2, PPC 60x other or no Turbo board**
Z3_OFF	**Shipping configuration**	If the ONBoard 1200 ex ZIII-Modul is connected
Hardware Update A**)	reserved	**Shipping configuration for normal operation**
Hardware Update B**)	reserved	**Shipping configuration for normal operation**

*) For Apollo Turbo board we cannot tell anything about compatibility since various Apollo board differ very much. Please understand that we cannot give any support for problems with Apollo turbo boards
) The ONBoard 1200 ex hardware can be updated by Software. If such an update is available (e.g. on the RBM-Support-page in the internet: www.rbm.de) you will get an exact documentation with the update file. During normal operation this jumper **HAS TO BE OPEN

Connectors for the Reset-button

RS	Main-Reset	Only use this if you have problems with the KB-Reset
KB	**Keyboard-Reset**	**Connect the Reset-button of your Tower here!**

Installing a Turbo board

As you see the ONBoard 1200 ex occupies the expansion slot of your Amiga 1200 but also supplies the same connector itself. To this one you connect your turbo board. Please make sure that the turbo board does not get short circuited by contacting the mainboard holder. If you are in doubt you can isolate the mainboard holder with some adhesive tape. Please take care that the turbo board is in a safe position especially if you transport your Towerhawk. When the turbo board is connected you will find two places at both sides where you can screw in a holder: screw a nut around 2mm onto a screw M3x16 which were supplied with the Towerhawk. Then screw this assembly into the two positions and put a rubber band between them. This guarantees the best safety for any kind of turbo board! (Picture 2)

Add ons

VidiON ex	Video-slot for installing Flickerfixer/Scandoubler (e.g. PicassoIV/Cybervision 64/3D)	
ONBoard 1200 ex Z3	Zorro3-Module (w/o DMA) for ONBoard 1200 ex For Zorro3-operation TurboON 32 4000 and a A4000-Turbokarte might be required *)	available 3. Quarter of '98
TurboON 32 4000	Adaptor to run A4000-Turbo boards in the Amiga 1200	available. 3. Quarter '98

*) we are developing currently on a solution which allows Zorro3-operation also with Blizzard turbo boards 1230/IV, 1240 and 1260.

Tested ZorroII-Karten

Name [3]	Funktion	Compatible [2]
Ariadne	Ethernet	Yes
A 2058	RAM	no [1]
A 2060	Arcnet	Yes
A 2091	SCSI/RAM	RAM no [1] / SCSI no (DMA)
A 2286	PC-Brücke	Yes
A 2386	PC-Brücke	Yes
Buddha	AT-Bus Controller	Yes [5]
Catweasel	AT-Bus/Floppy Controller	Yes [5]
Cybervision 64 3D	Grafik	Yes
GVP Serie II	SCSI/RAM	RAM no [1] /SCSI no (DMA)
Hydra Amiganet	Ethernet	Yes
HyperCOM 4	Multi I/O	Yes [4]
IOBlix	Multi I/O / Sound / Ethernet	Yes
I/O Extender	Multi I/O	Yes
ISDN-Master	ISDN	Yes
ISDN-Blaster ZII	ISDN	Yes [4]
Melody	Sound	Yes
Merlin	Grafik	Yes
Multiface III	Multi I/O	Yes
Oktagon 2008	RAM/SCSI	RAM no [1] / SCSI yes
Peggy Plus	MPEG	Yes (with Video-Adapter)
Picasso/Picasso 2+	Grafik	Yes
Picasso IV	Grafik/Flickerfixer	Grafik yes, Flickerfixer only with VidiON ex (add on)
Piccolo/Piccolo SD64	Grafik	Yes
Prelude	Sound	Yes
Retina Z2	Grafik	Yes (not all Retina-Revisions)
Toccata	Sound	Yes
VLab Motion	Motion JPEG	Yes
VLab Y/C	Digitizer	Yes
Vortex x86 SLC	PC-Brücke	no (DMA)
Blizzard 1230 II/III/IV	Prozessorkarte	Yes
Blizzard 1240	Prozessorkarte	Yes, sometimes mechanical problems with some revisions please contact the manufacturer Phase 5
Blizzard 1260	Prozessorkarte	Yes
Blizzard PPC 60x	Prozessorkarte	Yes
MTec 1230 (=Viper 1230)	Prozessorkarte	No, the RAM on the Mtec occupies the ZorroII-address-range!
Cobra 1230	Prozessorkarte	Yes

Table1

[1]) Adding RAM to the ONBoard makes no sense since the RAM speed on the accelerator is much higher than the internal speed of the A1200 (14MHz). But for the system both is FASTRAM...

[2]) The cards listed here were just checked for functional compatibility but not for EMC

[3]) Cards not listed were not checked yet. This does not imply that they do not work...

[4]) The HyperCOM4 and the ISDN-Blaster do not have any drivers in the data lines like recommended in the specs Zorro specs. If you have any trouble with these cards move them to the first slot.

[5]) Not all versions of the Buddha and Catweasel work properly in all Amiga 1200 configurations!

Warrentee and technical support

On this IOBlix RBM Digitaltechnik provides a 6 months guarantee starting with the date of the first sales (date of the retailers bill). During this guarantee period, RBM will repair all defectives which are due to material or production faults at our free choice either by repair or exchange. Repairs made under warrentee will not affect the length of the warrentee period.

Excluded from the guarantee are damages and malfunctions which have been caused by external interference or inproper usage especially unauthorized repair or inexperted installation.

Also excluded from the guarantee are malfunctions or function disturbance on the IOBlix, on other devices installed in/on the Amiga or on the Amiga itself which occur after the installation of the IOBlix or later modifications of the system as far as it cannot be doubtlessly proven that a technical defect of the IOBlix is the cause of the malfunction or function disturbance.

RBM Digitaltechnik does not guarantee that this product is suited for a certain application. Also we do not take over any liability for defects or damages on other devices than the IOBlix, as well as expressively not for the loss of data which are or seem to be in direct or indirect connection with the usage of the IOBlix even if RBM has been informed about the possibility of such a connection in advance.

Guarantee handling

Service-Hotline:
Before you contact our service hotline please read this manual carefully. You may find additional information on our web site (www.rbm.de)

If you have further questions about the IOBlix, contact you local dealer or e-mail to support@rbm.de. Our service hotline is open Mo-Thu. 5.00-6.00 p.m. (+49 5651-8097-21). Please make sure your system is right beside you when you call to be able to check immediately on questions we have!

Returns: (within Germany only)
We can only accept returns with a valid RMA number which you can get from our service hotline. Please note this number in big letters on the package. Please include a complete description of the malfunction and your telephone number if we have further questions.

Ship to: RBM Digitaltechnik Bernd Rudolf
Goldbachstr. 49
37269 Eschwege

In all other Countries please contact your local dealer or distributor!

If we cannot detect any defectives on returned components we have to charge a fee of DM 50,- for testing and handling. For defectives not covered by guarantee we charge repair cost depending on the defectives.

For transport damages caused by unsuitable packaging no liability can be taken over.

RBM Digitaltechnik Bernd Rudolf

Goldbachstr. 49

37269 Eschwege

Tel: 05651/8097-0   Fax: +49 5651/8097-11